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Memorandum

To: LaDonna Turner, Site Assessment Manager
Technical and Enforcement Branch
U.S. Environmental Protection Agency, Region 6

From: Dana Bahar, Manager, Superfund Oversight Section
Ground Water Quality Bureau, New Mexico Environment
Department.

Date: September 10, 2009

Subject: Pre-CERCLIS Screening Assessment of Poison Canyon Mine,
McKinley County, New Mexico: Further action under CERCLA
recommended

Site name	Poison Canyon Mine				
City	not applicable	State	New Mexico	Zip code	not applicable
County	McKinley				
Latitude	35° 20' 29.51"	Longitude	107° 49' 51.55"		

Site physical description: The Poison Canyon Mine currently is an area of mine pits and presumably recontoured mine wastes, which is bounded on 3 sides by bedrock escarpment. At the time that NMED staff visited the site, surface water was present within some of the pits. A surface water drainage has developed through the middle of the site, which connects to the former access road that has been eroded into a drainage. An area of bench cut roads west of the main mine site also was assessed as part of this site.

Site identification: Potential alluvial ground water contamination within the Grants Mineral Belt was identified because background standards established for the contaminants of concern for ongoing remedial action associated with the Homestake Mining Company NPL site (CERCLIS NMD0007860935) are generally higher than Maximum Contaminant Levels (MCLs). NMED conducted sampling of private residential wells in subdivisions located in the vicinity of the HMC site, and found that the majority had one or more contaminant concentrations exceeding MCLs.

Site summary: Observations made during NMED's Site reconnaissance are shown on the accompanying figures. Most surface materials exhibited only slightly elevated

radioactivity (highest reading=63 counts per second [cps]; background=24 cps). Bedrock outcroppings exposed within the larger excavation and along the bordering escarpment also had slightly elevated radioactivity (highest reading=121 cps). Contamination of vicinity soils and surface drainages by precipitative erosion comprises the primary contaminant pathway that may be associated with this site. Additionally, site runoff of contaminated wastes may impact ground water quality through seepage through alluvium.

Targets: The closest residence to the Site is located off of Haystack Road, approximately 1.05 air-miles to the southwest, from which another residence is visible further to the west. Residences also are located near the junction of State Hwy. 605 and 509, approximately 2.8 air-miles northeast of the Site. Other potential targets may include cattle and wildlife.

Closest well sampled to date: livestock well SMC-22 (1.1 air-miles; 48.2 µg/l total uranium in 2009 sampling).

Site ownership and Potentially Responsible Parties: Surface rights reportedly are held by Schmitt; mineral rights reportedly are held by Newmont Mining Company. Teton Exploration and Drilling Company reportedly last operated the mine in 1978.

File review: NMED staff reviewed the following files:

- Database compiled by Mining and Minerals Division of the New Mexico Energy, Minerals, and Natural Resources Department (07/20/2007).
- Anderson, Orin J., 1980. "Abandoned or inactive uranium mines in New Mexico".
- McLemore, Virginia T. and William L. Chenoweth, 1991. "Uranium mines and deposits in the Grants district, Cibola and McKinley Counties, New Mexico." New Mexico Bureau of Mines and Mineral Resources Open-file report 353.
- Rappaport, Linda, "Uranium deposits of the Poison Canyon ore trend, Grants District," in "Geology and technology of the Grants Uranium Region, 1963. State Bureau of Mines and Mineral Resources.
- U.S. Geological Survey, 1997. "Gallup quadrangle NURE HSSR study." OFR-97-492.

Site reconnaissance: NMED staff conducted a Site reconnaissance on July 1, 2009.

Recommendation: A release of CERCLA hazardous substances has been documented at the site. NMED recommends further investigation under CERCLA to assess the risk posed by the site using the Hazard Ranking System.

NMED recommends that the investigation include the following:

1. Sample sediments along drainages to characterize extent of Site-derived waste dispersion.
2. Investigate and characterize ground water impacts.

In addition NMED recommends the following actions be performed to address immediate threats to public health and the environment:

1. Remove waste with elevated radioactivity.

Ms. LaDonna Turner, EPA Region 6 Site Assessment Manager
 Pre-CERCLIS Screening Assessment of Poison Canyon Mine, McKinley County, New Mexico
 September 10, 2009

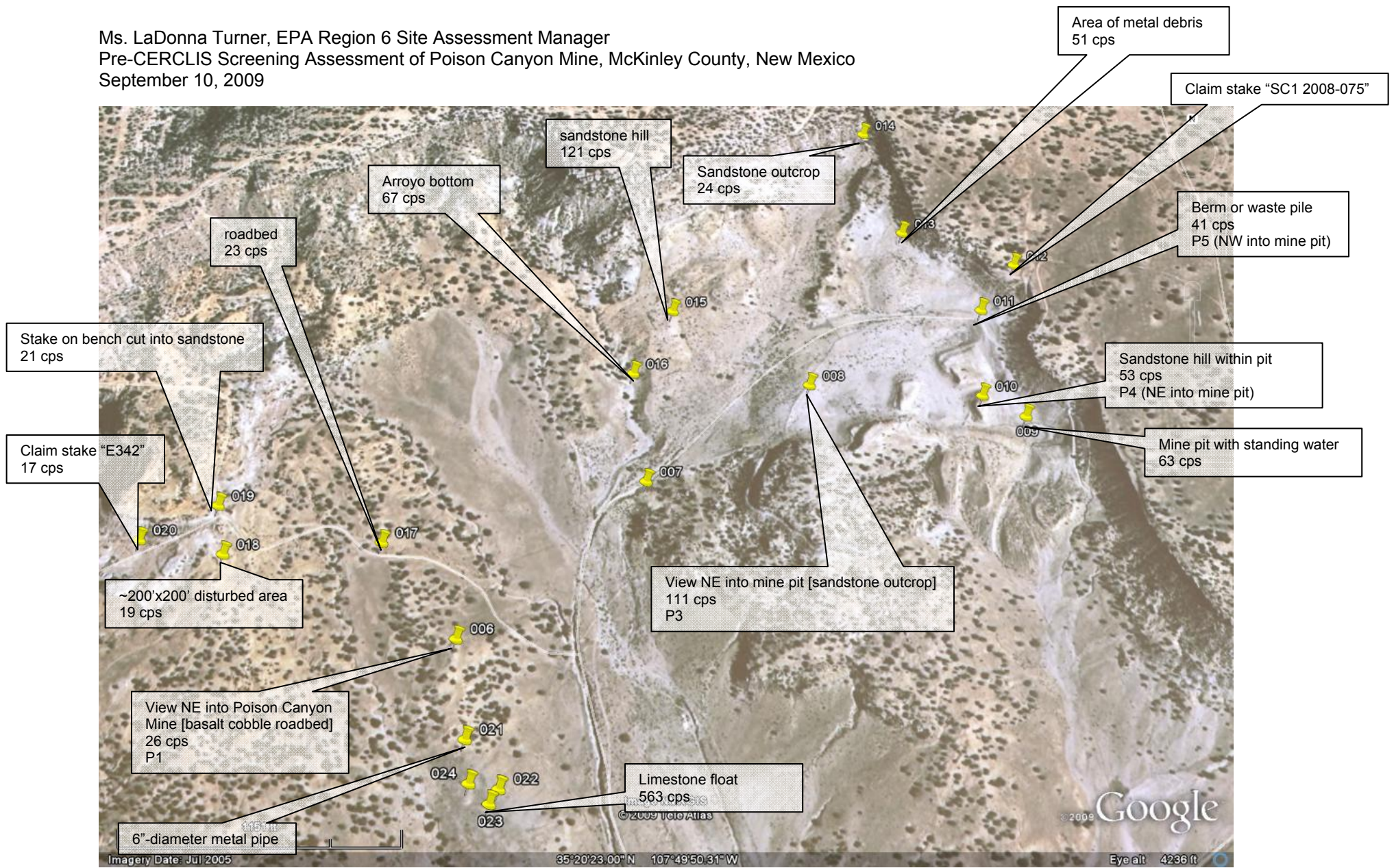


Figure 1: Poison Canyon Mine—measurements taken on July 1, 2009

“Px” reference the location of photographs on pages following.



P1: Poison Canyon Mine view NE into minesite



P2: Poison Canyon Mine view NNE into minesite



P3: Poison Canyon Mine view into mine pit

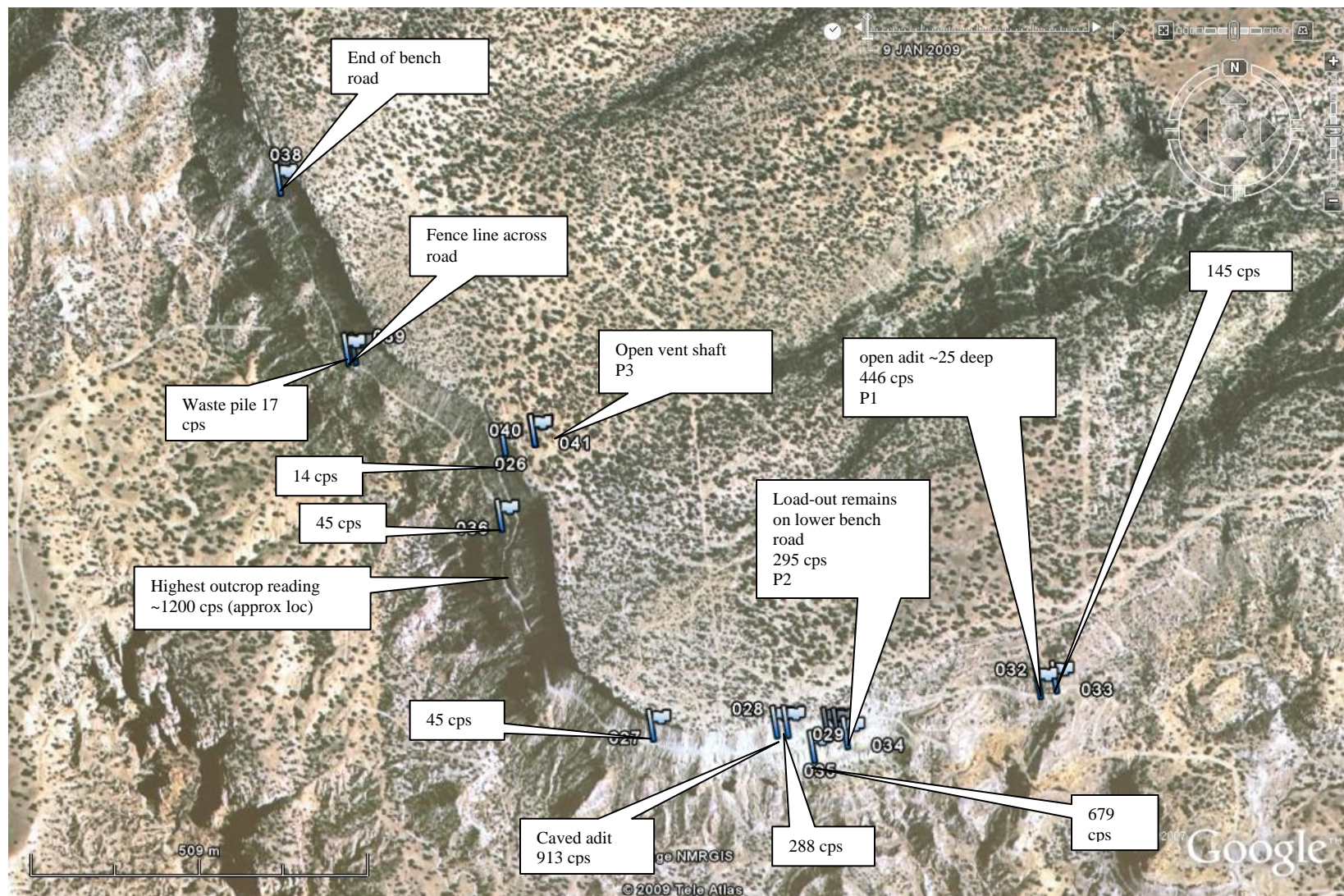


P4: Poison Canyon Mine view NE into mine pit

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P5: Poison Canyon Mine view NW into mine pit





P1: Blue Peak mine open adit



P2: Blue Peak mine load-out facility remains



P3: Blue Peak mine open vent shaft on mesa top.



Blue Peak mine: view towards southwest

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Pre-CERCLIS Screening Assessment of Poison Canyon Mine, McKinley County, New Mexico
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Blue Peak mine view towards southwest showing residences